

20W Constant Current 0-10V-FLS Series



■ Approve

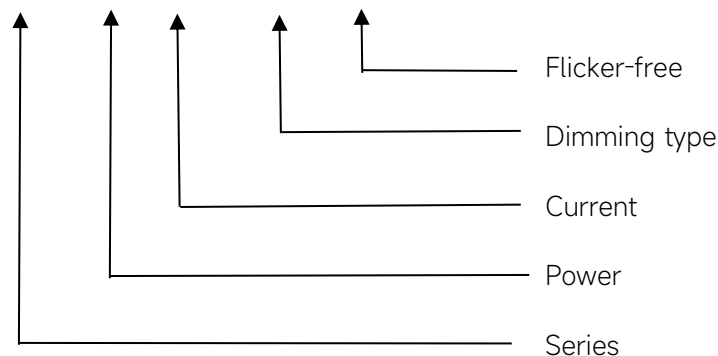
CE SELV

◆ Description

FLS-20-700 0-10 LA is an 20W constant current LED driver that operates from 176-264Vac input with 400 to 700mA output current and a forward voltage range from 12 to 40Vdc. The output current is adjustable by DIP Switch. With it's compact dimensions from 125 x 45 x 27.5mm it is easy to integrate in LED Panel and down light products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

◆ Model code

FLS-20-700 0-10 LA



Features

- Class II, SELV, independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OVP
- Power Factor 0.9C
- Efficiency $\geq 84\%$
- Support 0-10V Dimming
- 5 years warranty

Applications

- LED panel light, Down light

◆ Specification

| | | |
|-------------------|-----------------------------------|--|
| Output | Constant Current (mA) | 400-700mA |
| | Voltage Range(VDC) | 12-40VDC |
| | Unload voltage Max.(VDC) | 50VDC |
| | Current Accuracy | ±5% |
| | Output LF current ripple(≤120Hz) | ≤42mA _{p-p} @Full Load,240VAC |
| | SVM | ≤0.4 |
| | Pst | ≤1 |
| | Efficiency(Typ.) | ≥84% |
| Input | Rated input voltage(VAC) | 220-240VAC |
| | Range of input voltage(VAC) | 176-264VAC |
| | Range of input voltage(VDC) | 176-280VDC |
| | Frequency(Hz) | 0/50/60 Hz |
| | Displacement factor | ≥0.7 |
| | Power Factor | 0.9C |
| | Input Current max | 0.17A MAX. @Full Load,176VAC |
| | Start-up time | < 0.5S |
| | No Load Power | ≤0.5W |
| | THD (Typ.) | ≤9% |
| Dimming | Dimming | YES |
| | Dimming mode | 0-10V |
| | Dimming depth | 1% |
| | Dimming current range | 5 ~100% |
| Protection | Over Load Protection | 103-120% YES/Non-auto Resume |
| | Over Voltage Protection | > 50VDC YES/Non-auto Resume |
| | Short circuit Protection | YES/Non-auto Resume |
| | Over Temperature Protection | YES/Auto Resume |
| Environment | Operating Temperature | -20°C...+45°C |
| | Humidity | 20%-90%RH |
| | Tc | 80°C |
| | Storage Temperature | -20°C...+45°C |
| | Life time | > 30,000h@45°C |
| Surface standards | Dimension | 125X45X27.5(LXWXH)mm |
| Others | EN 61347-1; EN61347-2-13; EN62384 | |
| | ErP | EU 2019/2020 |
| | RoHS | RoHS (2011/65/EU) (EU)2015/863 |

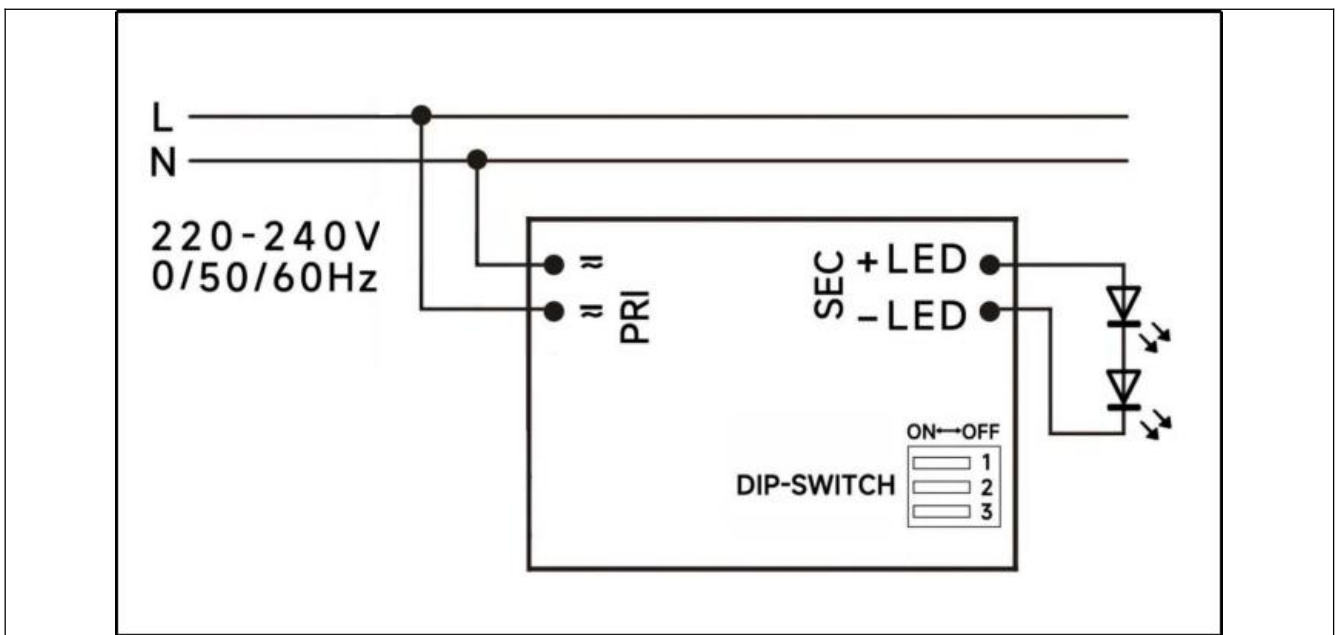
| | |
|------|---|
| Note | <p>1.All parameters NOT specially mentioned are measured at 230VAC input , full load and 25°C of ambient temperature.</p> <p>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.</p> |
|------|---|

◆ Parameter

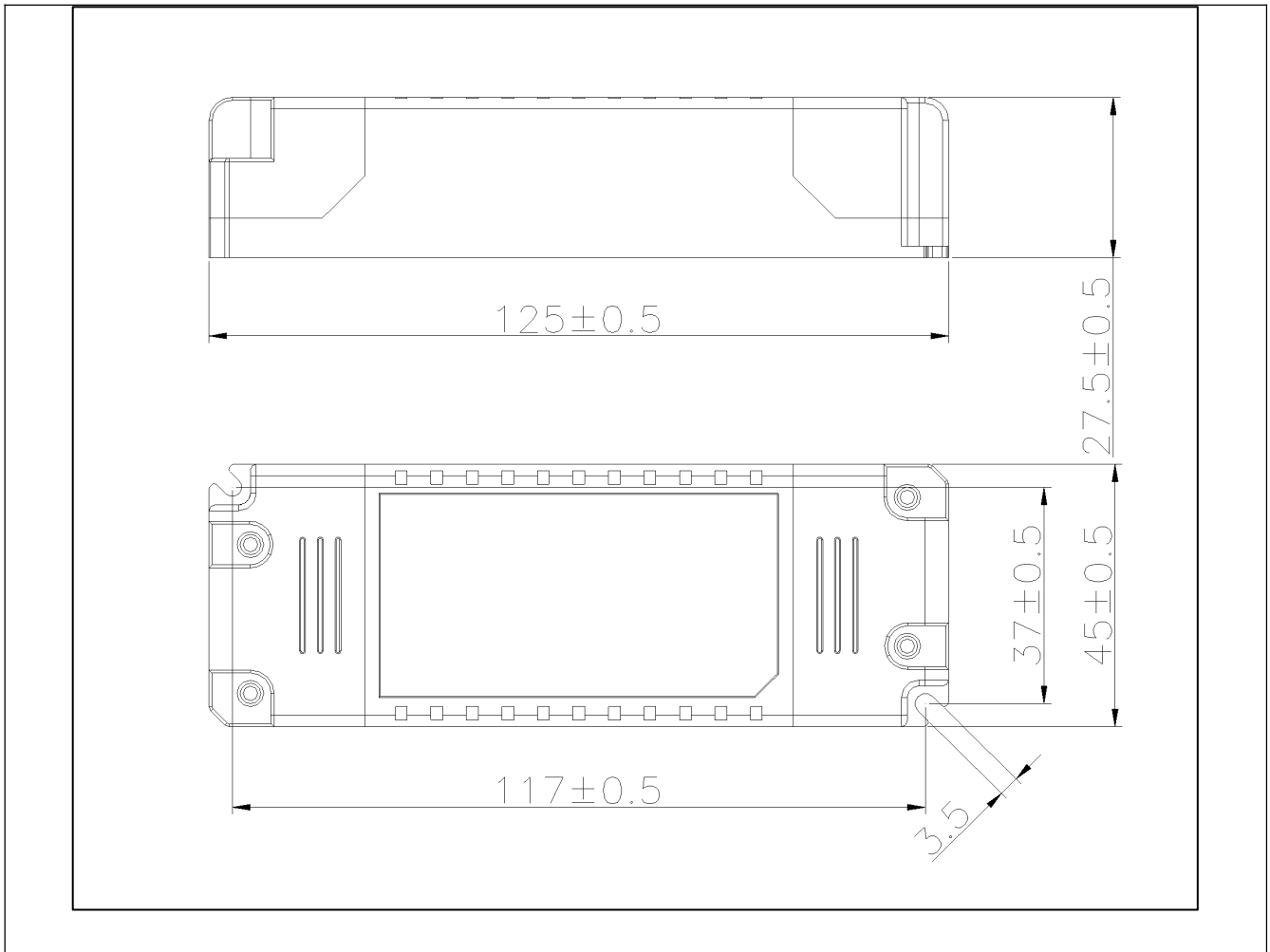
| Number | Output | | | | Switch position | | |
|--------|--------------|---------------|-----------------------|-----------|-----------------|----|----|
| | Current (mA) | Voltage (VDC) | Voltage No load (VDC) | Power (W) | 1 | 2 | 3 |
| 1 | 400mA | 12-40VDC | 50VDC | 16W | -- | -- | -- |
| 2 | 450mA | 12-40VDC | | 18W | -- | -- | ON |
| 3 | 500mA | 12-40VDC | | 20 W | ON | -- | -- |
| 4 | 550mA | 12-36.5VDC | | 20.1 W | -- | ON | -- |
| 5 | 600mA | 12-33.5VDC | | 20.1W | -- | ON | ON |
| 6 | 650mA | 12-31VDC | | 20.2 W | ON | ON | -- |
| *7 | 700mA | 12-29VDC | | 20.3W | ON | ON | ON |

* Factory default

◆ Wiring diagram



2D diagram

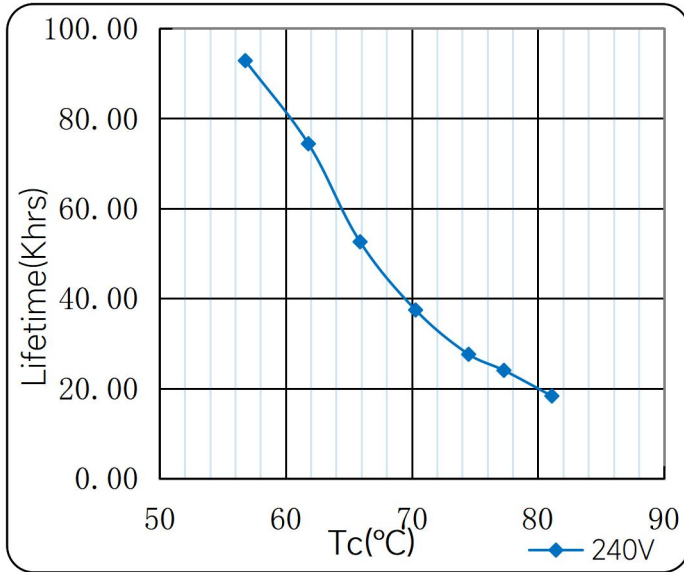


◆ Wiring & Connections

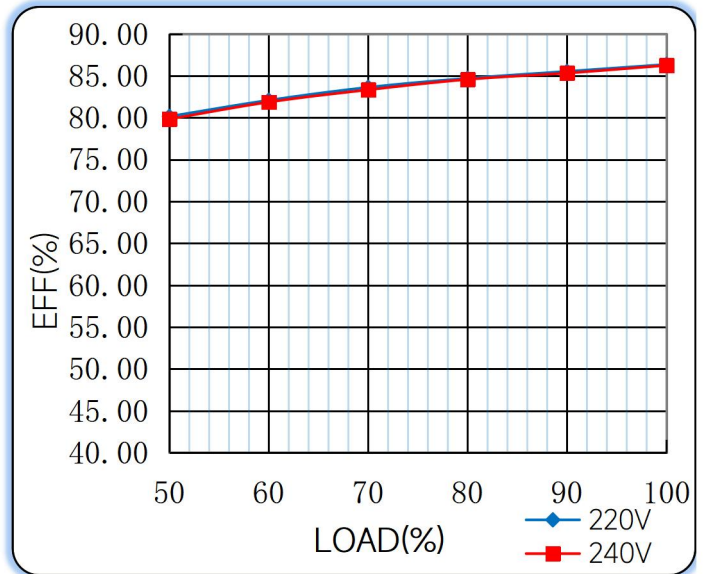
| Specification item | | Value (Unit) |
|--------------------|---------------------------|----------------------------|
| Input | Input wire cross-section | 0.75...2.5 mm ² |
| | Input wire gauge. | 16...20 AWG |
| | Input wire strip length | 7..9mm |
| Output | Output wire cross-section | 0.5...1.5 mm ² |
| | Output wire gauge. | 16...20 AWG |
| | Output wire strip length | 7..9mm |

Curve for FLS-20-700 0-10 LA, $I_o=700mA$

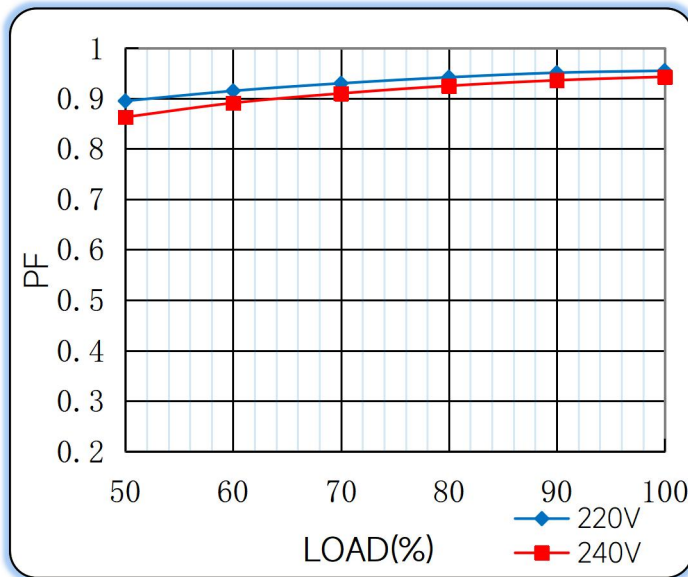
Lifetime vs. Temperature Curve



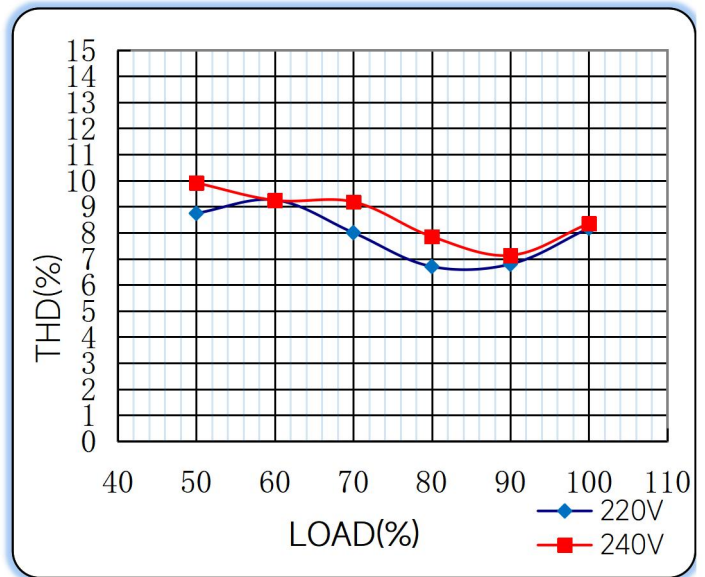
Efficiency vs. Load



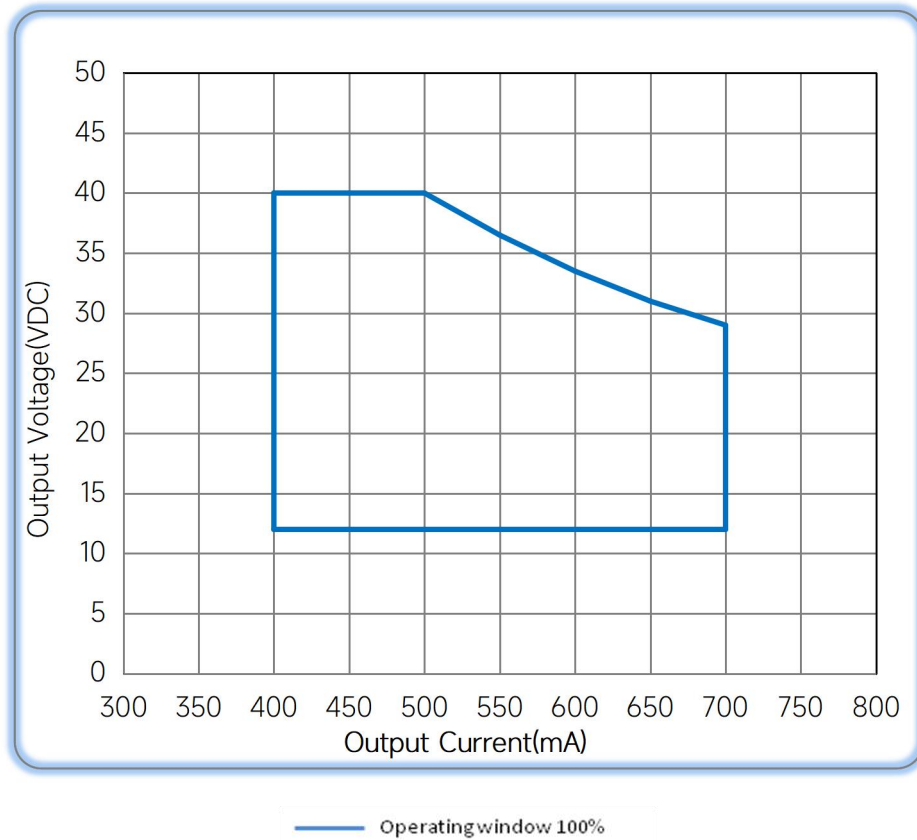
Power Factor Characteristics



THD vs. Load



Operating window



◆ Revision Updates

| ITEM | BEFORE | AFTER | VERSION | DATE |
|---------|--------|-------|---------|------------|
| Initial | | | A | 2022/05/15 |
| | | | | |

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Manual